Application No.: 09/648,569 Attorney Docket No: 0202us810

Page 7

These amendments are made without prejudice and are not to be construed as abandonment of the previously claimed subject matter or agreement with any objection or rejection of record.

## REMARKS

## Status of the Claims

Claims 1-72 are cancelled herein, without prejudice to subsequent renewal. Please note that Applicants reserve the right to file subsequent applications claiming the canceled subject matter, and that the claim cancellations should not be construed as abandonment of any presently or previously claimed subject matter or agreement with any objection or rejection of record.

Claims 73-115 are added herein. The claims are fully supported in the specification and add no new matter. Support for the term "variant" is found, for example, at least at page 13 lines 23-25. Support for substitutions recited in claim 73 are found throughout the specification, for example, at least at page 19 lines 17 to 21. Support for substitutions recited in claim 75 are found throughout the specification, for example, at least at page 32 lines 28-33. Support for substitutions recited in claim 77 are found throughout the specification, for example, at least at page 32 lines 28-33.

Claims 73-115 are pending with entry of this amendment.

#### Restriction

The invention is subject to a restriction requirement.

A. Claims 1-72 were restricted under 35 U.S.C. § 121, requiring Applicants to elect one of the following groups for prosecution in the present application:

Group I: Claims 1-53, drawn to polypeptide interferon conjugates (Applicants note

that the Examiner may have intended claims 1-51), corresponding new

claims 73-95;

Group II: Claims 52-56 and 66-72 drawn to DNA, vector, host cell and methods to

produce protein, corresponding new claims 96-107 and 109-110;

. JUN.- 17. 2002 9:44 AM

Received from < > at 6/17/02 1:29:44 PM [Eastern Daylight Time]

Application No.: 09/648,569 Attorney Docket No: 0202us810

Page 9

# Restriction of the Invention to SEQ ID NOs 1-38 is Inappropriate

In an effort to demonstrate to the Examiner why it is inappropriate, and in fact impossible, to restrict Applicants' invention among SEQ ID NOs:1-38, below is a brief description of these sequences:

SEQ ID NO:1 is the cDNA sequence of wild-type human IFN-beta (GenBank Accession number M28622).

SEQ ID NO:2 is the protein sequence of wild-type human IFN-beta.

SEQ ID NO:3 through SEQ ID NO:20 are oligonucleotide primers which were used to prepare a synthetic, codon-optimized DNA construct encoding IFN-beta (SEQ ID NO:2) as detailed in Example 1. Applicants respectfully point out that it would be meaningless to attempt to restrict the invention according to any one of SEQ ID NOs:1-20, since SEQ ID NOs:1-20 represent, or encode, all or parts of wild-type human IFN-beta, which is <u>not</u> the claimed invention.

The remaining sequences specified by SEQ ID NO: in the application are either mutagenic oligonucleotide primers which were used in <u>at least</u> pairwise fashion to incorporate exemplary mutations into the synthetic, codon-optimized IFN-beta DNA construct described above, or, are primers which were used simply for amplification/subcloning purposes:

SEQ ID NOs:21 & 22 are forward and reverse DNA primers used to incorporate a K45R mutation (as described in Example 2).

SEQ ID NOs:23 & 24 are forward and reverse DNA primers used to incorporate an F111N mutation (as described in Example 2).

SEQ ID NOs:25 & 26 are forward and reverse DNA primers used to incorporate an R113T mutation (as described in Example 2).

SEQ ID NOs:27 & 23 are forward and reverse DNA primers used to incorporate a K19R mutation (as described in Example 2).

SEQ ID NOs:28 & 29 are amplification primers used to amplify & subclone synthetic DNA constructs into other expression vectors (as described in Example 3).

Application No.: 09/648,569 Attorney Docket No: 0202us810

Page 10

SEQ ID NOs:30 & 31, and SEQ ID NOs:26 & 32, are two overlapping primer sets used to construct F111N plus R113T (as described in Example 5).

SEQ ID NOs:28 & 33, and SEQ ID NOs: 34 & 35, are two overlapping primer sets used to construct Q49N plus Q51T (as described in Example 6).

SEQ ID NOs:36 & 33, and SEQ ID NOs: 34 & 35, are two overlapping primer sets used to construct Q49N, Q51T, F111N, R113T (as described in Example 7).

SEQ ID NOs:37 & 26 are forward and reverse DNA primers used to construct S(-1)A plus M1Q (as described in Example 15).

SEQ ID NOs:38 & 26 are forward and reverse DNA primers used to construct S(-1)AQ (as described in Example 15).

As the Examiner can see, pairs (and, in some instances, pairs of pairs) of primers were used to prepare exemplified mutations. In some instances, an individual primer (such as, SEQ ID NO:26, or SEQ ID NO:33) was employed in several different mutagenesis reactions. Thus, restricting the invention by individual primer sequences is simply meaningless, and would render it impossible for Applicants to capture the intended scope of their invention.

## **Proposed Species Election**

In an effort to expedite prosecution, Applicants have cancelled claims 1-72 without prejudice to subsequent renewal, and have introduced herein new claims 73-115. Applicants elect claims 73-95 drawn to Group I (polypeptides), and claim 111 should rejoinder between Group I and III be effected.

Applicants further respectfully request that, instead of further restricting the invention by SEQ ID NO (which is tantamount to imposing a restriction requirement on an individual claim), the Office instead examines a "reasonable number" of species encompassed by the claim. See, 37 C.F.R. §1.146 and MPEP §809. A species election, pursuant to MPEP §803.02, strikes an appropriate balance between the concerns of the Office regarding administrative matters and unduly burdensome examination, and the rights of an inventor to claim an invention as it is